EPA Comments on the Phase I RFI/RI Workplan for Operable Unit 4, The Solar Ponds

General Comments

Overall, there exist several shortcomings with this workplan. These shortcomings are: 1) lack of coordination with the Interagency Agreement (IAG); 2) inadequate Baseline Risk Assessment Plan; 3) inadequate Data Needs and Quality Objectives; 4) poor ARAR analysis; and 5) lack of coordination of the Field Sampling Plan (FSP) with the Standard Operating Procedures (SOPs), Quality Assurance Project Plan (QAPjP) and Health and Safety Plan.

The IAG describes the process for closure of Interim Status Closure Units external to buildings. The closure of these units must be conducted in two phases. Phase I must focus on the characterization of sources/soils of contamination. It must be noted that sampling in the vadose zone is within the scope of this Phase I investigation. Sampling at specific depth intervals will provide information for determining if soils within the vadose zone constitute a source to ground water contamination. Phase II will address nature, extent, fate and transport of any contamination. This workplan must be globally modified to reflect consistency with the IAG.

The Baseline Risk Assessment for phase I will consist of a Human Health Risk Assessment and Environmental Evaluation at the source of contamination. More comprehensive studies will be performed during Phase II when considering nature, extent, fate and transport of contaminants. In addition, it must be noted that one of the purposes of the Baseline Risk Assessment is to provide a basis on whether or not a remedial action is needed for the site. Although, for Interim Closure Units external to buildings the closure will be administered as an Interim Measure/Interim Remedial Action (IM/IRA), it should be recognized that in general the Baseline Risk Assessment is not the only decisive factor for conducting IM/IRAs. IM/IRAs activities for a site can be justified by other reasons such as the necessity to stop continuing migration of contaminants from a highly contaminated ar ea to a less contaminated area or for closure of the unit. For the case of this operable unit, an IM/IRA has already been approved to dry the pond water prior to the development of the Baseline Risk Assessment.

Data needs for this Phase I workplan must be limited to the collection of data to characterize site physical features, and to identify and characterize sources and contaminated soils to support a closure determination. A detailed discussion of data needs to meet the objectives of Phase I must be included in this

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workplan. In addition, the Data Quality Objectives process must be discussed in detail. This must include a discussion on identification of decision types, data uses/needs and data collection program.

The Applicable or Relevant and Appropriate Requirements (ARARs) development process, as well as the categories of ARARs must be discussed in detail. Identification of chemical specific ARARs based on available data or expected contaminants to be found during remedial investigation must be presented in this workplan. In addition, this workplan must discuss the respective regulations which require the attainment of all the identified ARARs in selected remedies.

There appears to be a lack of coordination of this workplan with the site-wide documents. The FSP must be limited to gather the required data to fully characterize the sources/soils of contamination. Information on types of sampling, location, number of samples and frequency must be provided. Sampling methods are described in the SOPs. If a specific sampling method is to be used which is not described within the SOPs because of the nature of the site, then a SOPA must be submitted for EPA and CDH approval. In addition, the FSP must include a comprehensive analyst list. Specific comments on this workplan are provided below.

Specific Comments

Executive Summary The contents of this section must be modified to state that the objectives of this Phase I will be limited to characterization of sources/soils of contamination to support closure of the Solar Ponds. In addition, the Human health Risk Assessment and Environmental Evaluations must be performed at the source. More comprehensive studies will be conducted during Phase II.

Section 1.1, Purposes and Objectives, page 1-1. This section is not consistent with the IAG. Phase I only addresses the characterization of sources/soils of contamination. Extent of contamination will be addressed in Phase II. This needs to be corrected.

Section 2.1.2.2, Solar Evaporation Pond 207-A, page 2-3. This section states that the original asphalt planking construction material for Pond 207-A was removed in November 1963 during the redesigning of the pond. Where and how was this asphaltic material disposed of?

Section 2.1.5, Recent Investigations, page 2-10. There is not enough evidence to assume that pond 207-B underdrains were not constructed. The introduction of water into the line running north between the manholes, shows that some of the manholes, and

the north-running line indicated in Figure 2-14, were constructed in early 1960s, but does not definitively indicate whether underdrains were constructed or not. It seems that the only way to find out if underdrains are present, is to check if there are any pipes under the ponds and connected to the manholes. Further investigation regarding this matter is needed, since buried pipes may have an effect on contaminant migration and may be, or may have been, potential sources of contaminant release.

Section 2.2.5.3, Metals, page 2-28. Elevated concentrations of chromium and nickel occurred at a depth of 29 feet northeast of the solar evaporation ponds and on the north side of the north walnut creek drainage (SP 11-87). There is not enough information to support that these high concentrations of nickel and chromium are not associated with the solar ponds. Further investigations to characterize the source of contamination of these metals is needed.

Section 2.2.5.3, Organic Contamination in Soils, page 2-32. Analytical data from the core samples collected in 1986 indicate the presence of low concentrations of methylene chloride, acetone, 1,1 DCA, $CHCl_3$, 2-butanone, TCE and 1,1,1,- TCA. No analysis for laboratory blanks were provided; therefore, it is not possible to evaluate whether the detected concentrations are laboratory contaminants. Conclusions regarding these contaminants can not be drawn at this point. Further soil investigations are needed to characterize the sources of these contaminants.

Section 3.3, Baseline Risk Assessment, page 3-9. The Baseline Risk Assessment will provide a basis for deciding whether or not remedial action is needed for the site. However, although for Interim Status Closure Units external to buildings the closures will be administered as IM/IRAs, in general the Baseline Risk Assessments are not the only decisive factor for conducting IM/IRAs. This must be corrected and explained.

This section must state that the Human Health Risk Assessment and the Environmental Evaluation for Phase I will be conducted at the source. A more comprehensive Baseline Risk Assessment will be performed during Phase II.

Section 3.4, Data Needs and Sampling Objectives, page 3-9. This section must state that the data to be collected during Phase I will be limited to the characterization of sources/soils of contaminant and will support a closure decision for the Solar Ponds.

Section 3.4.1, Data Quality Objectives, page 3-10. Collection of surface water samples is not within the scope of Phase I activities. Contamination of surface water will be addressed in Phase II.

This section needs to discuss the Data Quality Objectives process. This should include at a minimum a discussion of the identification of decision types, data needs/uses, and data collection program.

Section 3.4.2, Applicable or Relevant and Appropriate Requirements, page 3-10. This section needs to explain the ARARs process. This will include the following: ARARs development and identification, as well as a discussion on categories of ARARs.

Section 4.0, Field Investigation/Sampling Plan, page 4-1. The objective of the Phase I field activities is to characterize the sources of contamination/soils. Extent of contamination will be addressed in Phase II. This must be corrected. Also, the tasks described in this section must be limited to characterization of the sources/soils of contamination.

Section 4.2.1, Surface Contaminant Survey, page 4-5. A radiation screening survey for surface soils contaminated with plutonium and americium needs to be performed before and during field activities. This would provide information to determine if there is a need to wear respirators for protection against resuspension of contaminated dust. If alpha monitors can not detect plutonium, then surface soil samples must be taken and analyzed for plutonium.

Section 4.2.3 Sampling Methods, page 4-6. This section must coordinate with the SOPs. If sampling methods are the same as described in the SOPs, then this section should just reference the particular SOP. In the case that a different sampling method is going to be used, a SOPA must be submitted for EPA and CDH approval.

Section 4.3.2, Sampling Locations, page 4-9. Types, number and frequency of samples must be specified in order to fully evaluate whether this workplan will meet the objectives of Phase I.

Section 4.3.3, Sampling Methods, page 4-10. The sampling methods included in this section are standard methods which are covered in the SOPs. Rather than listing these sampling methods, the workplan should reference the particular SOPs which will be important to the FSP.

Section 4.4, Task 4 - Soil/Vadoze Zone Investigations, page 4-10. Soil/vadose zone investigations for Phase I must be limited to characterization of sources of contamination. This section must be corrected.

Section 4.4.2, Sampling Locations, page 4-11. Sampling locations to characterize soils and the vadose zone around the French Drain System need to be identified. In addition this section must

specify the types of samples, number, depth intervals and frequency of samples.

Section 4.4.3, Sampling Methods, page 4-11. This section must make reference to the SOPs that describe these sampling methods.

Section 4.6, Sample Analysis and Handling, page 4-18. This section must be coordinated with the SOPs and QAPjP site-wide documents. Only OU specific information would be included in this section.

Section, Sample Analysis, page 4-18. Table 4-3 must be expanded to include semivolatile organic compounds and PCBs. The master analyst list included in the QAPjP must be used as a reference. Discussion justifying a shorter list must be included in this section for EPA and CDH approval.